

ABSTRACT OF THE DISCLOSURE

The present invention uses at least one amplitude bit to assist the phase-sampling technique used in digital receiver architectures. For digital receivers where the Intermediate Frequency (IF) is an integer multiple of the fundamental frequency f_o , the present invention provides reduced processing complexity and reduced power consumption. The present invention allows the digital receiver to avoid performing coordinate rotation at high speeds, and replaces such a coordinate rotation with a simple phase subtraction. This replacement of the coordinate rotation allows the receiver to use a less complicated design, and to consume less power as a result.

5